

Six scientists honored by the Institute of Physics

The Council of the Institute of Physics in London has chosen six physicists to receive awards in 1982. At a ceremony to be held this month, David M. Brink of the University of Oxford will receive the Rutherford Medal; John R. Ellis of CERN will be honored with the Maxwell Medal; Sir Charles Frank, formerly Henry Overton Wills Professor of Physics at the University of Bristol, will be awarded the Guthrie Medal; Brian Isherwood of GEC's Hirst Research Center will receive the Charles Vernon Boys Prize; John M. A. Lenihan of the University of Glasgow and the West of Scotland Health Boards, will be presented with the Glazebrook Medal; and Simon Van der Meer of CERN will receive the Duddell Medal.

The Rutherford Medal is presented to David Brink "for his contributions to the understanding of nuclear structure and nuclear reactions."

After obtaining his BS from The University of Tasmania in 1950, Brink went to Magdalen College, Oxford, as a Rhodes scholar, and received his doctorate in 1955. He served as a lecturer at Balliol College, Oxford, from 1954 until 1958, when he became a fellow of Balliol and was appointed lecturer at the University. During his career at Oxford, Brink has served as a visiting professor at many institutions, including MIT, the Niels Bohr Institute in

Copenhagen, the Institut de Physique Nucléaire in Orsay, and the University of British Columbia in Vancouver.

Brink's research interests cover a wide range of topics in theoretical nuclear physics. His work on the electric-dipole photoexcitation of nuclei was the first to show how the excitation could be coherent, thus leading to "giant" resonances. He has also done significant research on cluster transfers in heavy-ion collisions, fluctuation cross sections, generator coordinate methods for nuclear structure and reactions, and adiabatic time-independent Hartree-Fock theory. He has been able to show that most nuclear data can be duplicated using a Hartree-Fock formalism with a simple effective interaction.

The Maxwell Medal is awarded to John R. Ellis "for his contributions to elementary-particle physics, particularly on the implications of gauge theories of strong and electro-weak interactions."

Ellis obtained his PhD in theoretical high-energy physics from King's College, Cambridge, in 1971. After spending 1970-71 as a visiting scientist at CERN, Ellis spent one year as a research associate at SLAC and one year as a research fellow in theoretical physics at Caltech. In 1973 he returned to CERN as a research fellow, becoming a CERN staff member in 1974.

His current research interests include applications of grand unified gauge theories of elementary particles to cosmology, applications of supersymmetry and attempts to unify the laws of gravity with the observed interactions of elementary particles. In his previous work with M. Gaillard and G. Ross, he predicted the third gluon jet in e^+e^- annihilation. He was among the first to study ways to search for the Higgs boson, to make a detailed quantitative study of grand unified theories, and to consider seriously the six-quark model.

The Guthrie Medal is presented to Frederick Charles Frank "for his extensive contributions to the physics of solids." After graduating with honors in chemistry from Lincoln College, Oxford, Frank went on to obtain his PhD

from Oxford in 1937. He was at the Kaiser Wilhelm Institut für Physik in Berlin from 1936 until 1938, when he came to the Colloid Science Laboratory in Cambridge. From 1940 to 1946 he served at the Air Ministry's Assistant Directorate of Intelligence (Science). He then came to the University of Bristol where he advanced from research fellow to Henry Overton Wills Professor of Physics, serving as department head from 1969 until 1976. He spent the year from 1964 to 1965 as visiting professor at the University of California at San Diego, and from 1979 to 1980 as Raman Visiting Professor at Bangalore.

In his extensive research career he has investigated such topics as dielectrics, melting, neutrino mass, crystal dislocations, crystal growth, liquid crystals, polymers, mechanics of the Earth's crust and snow crystals.

Brian Isherwood was selected to receive the Charles Vernon Boys Prize "for his development and use of x-ray topography and multiple diffraction in the diagnosis of surface behavior and crystalline quality in materials and devices of importance in the electronics industry."

After receiving his degree in applied physics from Brunel University, Isherwood joined the staff of the GEC Hirst Research Centre in 1965, where he is

BRINK



VAN DER MEER





ELLIS

now a member of the scientific staff.

Isherwood is a member of a research and development team studying materials and materials processing. He has worked on the development and application of techniques based on x-ray diffraction for characterizing materials and is currently interested in the characterization of bulk and epitaxial-layer single crystals.

The Glazebrook Medal is awarded to John Lenihan "for his outstanding contributions to the organization and application of physics to medicine."

Lenihan obtained his master's from King's College, Newcastle-upon-Tyne in 1941. Following his service in the Royal Corps of Signals, he received his PhD from the University of Glasgow in 1949. He came to the National Health Service as a physicist in the Western Infirmary of Glasgow in 1948. Lenihan has been instrumental in developing the concept of a regional service for medical physics, with practitioners who are active throughout the wide range of medical physics and whose expertise is made available to all clinical special-

ISHERWOOD



ties. In 1973 he was appointed to the new chair of clinical physics at Glasgow University and now is both director of the Department of Clinical Physics and Bioengineering in the West of Scotland Health Boards and head of the Department of Clinical Physics at the University of Glasgow.

Simon Van der Meer is honored with the Duddell Medal "for the conception, design and construction of many experimental devices in the field of high-energy physics and particularly the development of stochastic cooling of particle beams."

After obtaining his degree in physical engineering from Delft Technical University, Van der Meer was employed at the Philips Physical Laboratory in Eindhoven. He came to CERN in 1956 and is currently active in accelerator-design research.

Throughout his career at CERN he has worked on many aspects of accelerator technology, including magnet design, power supplies and beam optics. His accomplishments include constructing the first magnetic neutrino horn, used to produce intense neutrino



LENIHAN

beams, and a method for measuring the luminosity of colliding beams. His seminal invention of stochastic cooling has enabled the accumulation of dense beams of antiprotons and has influenced the design of the present CERN proton-antiproton collider.

Spicer chosen Scientist of the Year

William E. Spicer of Stanford University has been named "Scientist of the Year" by the respected trade journal, *Industrial Research and Development*. Spicer was chosen for many achievements that have applications to current technology, including "his work in surface reactions, photoemission studies and solar cell research, and his founding of the Stanford Synchrotron Radiation Laboratory." John Bardeen, Wernher Von Braun and William Pickering are among those selected to receive this honor since 1966.

The winner is chosen from potential candidates in all fields of science for an effort worthy of recognition that has made a significant contribution to ap-

plied science. The honor includes being featured on the cover of the magazine, a ceremonial luncheon at which the winner gives a lecture on the work (subsequently printed in the magazine), and an honorarium of \$1000.

Spicer, currently Ascherman Professor of Engineering at Stanford, got his PhD in physics from the University of Missouri in 1955. He worked as a research assistant at RCA Laboratories from 1955 to 1962, when he joined the staff at Stanford as an associate professor of electrical engineering in 1962. Now, concurrently with his work as a professor, he is consulting director of the Stanford Synchrotron Radiation Project.

obituaries

John C. Johnson

John C. Johnson, University Research Professor in Acoustics at The Pennsylvania State University and former director of its Applied Research Laboratory, died on 20 February 1982. He was 61 years old. At the time of his death, Johnson was also Secretary of AIP and a member of the Executive Council of the Acoustical Society of America.

Born in Illinois, Johnson received his AB from Culver-Stockton College and

MA and PhD from the University of Michigan. After obtaining the doctorate, Johnson served as a technical supervisor at the Tennessee Eastman Corporation and then returned to the University of Michigan, where he headed an acoustics laboratory. In 1959, he went to Penn State as director of what was then known as the Ordnance Research Laboratory (now Applied Research Laboratory) and as professor of engineering research. Here Johnson established his reputation, building to first rank an institution that has car-